

NEW NORTH AMERICAN NEUROPTEROID INSECTS.

BY NATHAN BANKS.

PERLIDÆ.

Chloroperla marginata n. sp.—Length 10 mm. Yellowish, head not broader than the prothorax, yellow, ocelli and eyes black; antennæ yellowish at base, darker beyond; the ocelli form a triangle a little broader behind than long; prothorax yellow, a little obscure in the middle, sides very convex and narrowly but distinctly black, only slightly rugose within, once and a third broader than long, all angles much rounded; thorax yellow, scutellum margined with black behind. Abdomen yellow, darker along the middle, setæ pale. Legs yellowish. Wings yellowish, veins yellow, transversals at end of discal cells disjointed, upper branch of radial sector nearly twice as long as the pedicel beyond the transversals, about five transversals between the cubiti.

Two specimens from Colden, N. Y. [E. P. Van Duzee.] Allied to *C. pacifica* by black margined prothorax, but separated by the convex sides.

Nemoura coloradensis n. sp.—Length 8.5 mm., alar expanse 15 mm. Black, abdomen somewhat paler on the sides and below. Legs testaceous, blackish at knees, hind femora very distinctly banded with black at tips, tarsi blackish, no yellow on head nor prothorax, shining, both sparsely clothed with fine white pile. Wings hyaline at base, blackish on pterostigma and obliquely below to the cubitus, beyond and above the cubital fork gray, veins black; prothorax nearly square, rugulose; subcosta of fore wings before running into the radius touches the costa (in other species there is a cross-vein, though often very short), sector of cubitus arising from cubitus, but slightly curved.

One specimen, Ft. Collins, Col. [C. P. Gillette.] Known by its black tipped hind femora and dark apical part of wing.

Nemoura cinetipes n. sp.—Length ♂ 10 mm.; ♀ 12 mm.; alar expanse 22 mm. Black, legs pale, except dark bands at bases and tips of femora and tibiae, most distinct on the hind pair. Wings pale, with black veins, a large discal spot, a curved band beyond and extreme tip fuscous. Head and thorax covered with pale pile, prothorax faintly margined with yellow in front, about as long as broad behind, plainly broader in front, slightly rugose above; radial sector not much bent down at base, sector of cubitus plainly sinuous.

Several specimens, Olympia, Wash. [T. Kincaid], February, March and May. Readily known by the distinctly banded legs.

Nemoura venosa n. sp.—Length: ♂, 6 mm.; ♀, 7 mm.; alar expanse 13 mm. Head and thorax black; legs pale, except posterior femora, which are mostly black; antennæ fuscous. Wings pale, with black veins, margined with fuscous, less distinct in the ♂; head and thorax clothed with pale pile, prothorax

not margined with pale, distinctly broader behind than long, scarcely narrower behind, hardly rugose above; radial sector but little bent down at base, sector of cubitus arising from cubitus, slightly bent down at tip.

Colden, N. Y., July 6 [E. P. Van Duzee]. Small size and margined veins separate it from the other species known to me.

ARSAPNIA n. gen.

Resembles *Capnia* and also *Nemoura*. But few transverse veins, the costal ones like *Nemoura*, an oblique one beyond the tip of the subcosta; in the cubital area there is no series of transverse veinlets as in *Nemoura*, but only two between the cubiti and one behind, in this respect like *Capnia*; below the end of the subcosta the two veins do not arise from the radial sector, but from the transverse veinlet; and the second vein behind them arises from the transverse veinlet instead of from the cubitus as in *Nemoura*; palpi short, last joint short, cylindric; three small ocelli. Wings not involuted, anal area of hind pair large, folded; second tarsal joint much shorter than the two others; two setæ. It differs from *Capnia* in the longer apical cells, finer veins, and in the oblique veinlet beyond the tip of subcosta.

Type *Arsapnia decepta*.

Capnia vernalis Walk. very possibly goes in this genus, as it is stated to have venation much like *Nemoura*; the description does not, however, apply to *A. decepta*, which differs in the pale setæ, etc.

Arsapnia decepta n. sp.—Length 6.5-8.5 mm.; alar expanse 11-15. Black, legs rather paler, and the setæ much lighter in color. Wings grayish with black veins, rather darker at basal end of pterostigma. Head and thorax clothed with whitish pile; no pale on prothorax; body and legs quite hairy; head rather broader than prothorax, the latter a little broader than long, scarcely narrower behind and faintly rugulose above; wings rounded at apex, second apical cell ten to twelve times as long as broad, the posterior basal transverse vein continuous across the post-cubitus, the sector from cubitus, or rather from the transverse veinlet, quite suddenly bent downward at tip; setæ nearly as long as the abdomen; in the ♂ there is a prominent tubercle before the tip, upon which the apex of the bifid genital organ rests when reflexed.

Four specimens, Ft. Collins, Col. [C. P. Gillette].

SIALIDÆ.

Sialis concava n. sp.—Length 10-12 mm. Black, head with some ferruginous smooth spots; wings blackish, sometimes the apex more hyaline, veins black; structure almost identical with *S. infumata*, but the head between the eyes is plainly concave [in *S. infumata* it is convex] and the median pair of smooth spots are much shorter than in that species; the venation presents no constant differences.

Several specimens, Ithaca, N. Y.; one Sherbrooke, Canada (Begin); three with basal fuscous clouds to wings from Concord, N. Y., and Ridgeway, Ontario, Canada [E. P. Van Duzee].

MANTISPIDÆ.

Mantispa floridana n. sp.—Length to tip of wings 34 mm. Rufous, face yellow, a dark median stripe, narrow below the antennæ, rather broader on labrum, much broader above the antennæ and enclosing two yellow spots, dark spot each side above near the eyes; prothorax uniform rufous, anterior tubercles yellow, two triangular yellow spots at posterior end, continued into two stripes on mesothorax, below the origin of fore wings a yellow semi-circular mark, connected to a median, triangular, yellow spot below, above the latter a short spot each side, a similar semi-circle below the hind wings; membrane of joints of legs yellow. Abdomen with a broad black stripe each side, margined with yellow, a narrower stripe above, ventral segments margined with yellow, two spots toward base. Wings hyaline, in both pairs a rufous streak between the subcosta and radius, and continued to the apex of the wing, fifteen to sixteen discoidal areolets, anal vein furcate; large spine on femur i plainly less than width of the joint at that point. Abdomen large, broad in the middle, constricted at base.

One specimen from Lake Worth, Florida, in the collection of Mrs. A. T. Slosson.

Mantispa sayi n. sp.—Length to tip of wings 17-22 mm. Pale yellowish, face pale, above the antennæ reddish stripes, below is a transverse reddish band, tips of palpi and antennæ fuscous, the latter as long as breadth of the head; prothorax pale, reddish at each anterior corner, and a short basal red stripe which extends back over the meso- and metathorax, long, slender, with many transverse folds, and at each side anteriorly a tubercle. Abdomen yellowish, darker on the venter, a narrow dark red stripe above and one each side. Legs yellowish, anterior pair darker than others. Wings hyaline, veins fuscous, in both wings a red streak between the subcosta and radius to the pterostigma, ten to eleven discoidal areolets, anal vein not furcate, the long spine on femur i is almost as long as the width of the joint at that point.

Three specimens, two from Lake Worth, Florida (Mrs. Slosson); the other from Texas. One of the Florida specimens is much darker than the others.

Of the six described species of *Mantispa*, four are known to me, the two others may be separated on colorational characters.

- 1. Wings wholly fuscous **mesta.**
Wings not wholly fuscous 2.
- 2. Veins with black dots **viridis.**
Veins not dotted 3.
- 3. Anal vein simple in fore wing 4.
Anal vein furcate in fore wing 5.
- 4. A spot at apex of wing and two below radius **interrupta.**
No such spots present **sayi.**
- 5. Anterior half of wing wholly fuscous **brunnea.**
Space between radius and subcosta only dark **floridana.**

HEMEROBIIDÆ.

Berotha texana n. sp.—Length 9 mm. Face pale yellowish, vertex dotted with black, especially near the eyes, palpi reddish, antennæ pale yellow; prothorax short, highest in the middle line, crossed by two furrows, dull yellowish, with fuscous dots; meso- and metathorax still darker. Abdomen blackish. Legs pale, with fuscous dots; body and legs clothed with short white hairs, and long black and some white bristles. Wings narrow, hyaline, excised below tip which is acute, hind wings much less so than in *M. flavicornis*, veins fuscous, dotted with white, along the costal margin are three or four more prominent dark spots before the pterostigma, the latter is fuscous; fringe on fore wings interruptedly white and gray, on hind wings gray, transverse veins fuscous, five branches to the radial sector.

Two specimens, Central Texas. Differs from *B. flavicornis* in smaller size, darker colors, costal spots, etc.

HEMEROBIUS.

A large number of species have been described, most of them, however, closely related. They have been arranged in three groups, according to the number of sectors to the radius.

Group I.—Two sectors.

Two species, both described by Fitch, belong here, *H. amicus* and *H. occidentalis*, the former I have from Long Island, N. Y., the latter from Colorado.

Group II.—Three sectors.

Here belong the great majority of species, only a few of which I have been able to identify. They can be arranged in two sections.

Section A.—The cubitus bent toward the post-cubitus, thus making one of the connecting veinlets shorter than the other; usually no veinlet connecting cubitus and first sector.

Hemerobius castaneæ Fitch.

This is a very common species, and doubtless described by Walker. The genitalia come nearest to the European *H. micanzæ*, as figured by McLachlan, but the superior branch is rather longer and sharp pointed. It is not the *H. humuli*.

Hemerobius stigmaterus Fitch.

Less common than the preceding. Very close to the European *H. limbatus* Waesm., and probably identical. According to McLachlan two of Walker's species from the United States, *H. obliterated* and *H. crispus* are *H. limbatus*.

Hemerobius pacificus n. sp.—Alar expanse 19 mm. Head pale, a brown stripe below each eye, and a line at base of antennæ, the latter pale, thorax pale, hardly brown each side, legs and abdomen pale, veins of wings pale

with scattered light brown dots, some of those near the base darker brown; these dots give off indistinct oblique clouds, gradate veinlets mostly brown, clouded to form an indistinct band, border with groups of brown dots, pterostigma indistinct. Wings rather broad, pointed at tip, costal space narrow toward base, cubitus much bent toward post-cubitals, no connecting veinlet from upper branch of cubitus to the radius or first sector, three sectors, upper branch of the third forked before the inner gradate series, lower branch simple, five gradate veinlets of inner series, the last beyond the next to the last, six gradate veinlets in outer series, hind wings not marked, veins pale, except a few of the outer gradate ones. The appendages of this species are stouter than those of *H. castaneæ*, and when seen from above the inner branch is shorter.

Two specimens, Olympia, Wash. [T. Kincaid].

Hemerobius moestus n. sp.—Alar expanse 17 mm. Head pale, a brown stripe below each eye, antennæ and legs pale, thorax pale, hardly brown on the sides. Abdomen rather obscure, veins of wings pale, with scattered, light brown dots, dots around border, gradate veinlets brown and margined with brown, pterostigma reddish in both pairs of wings. Wings rather narrow, rounded at tip, costal area narrow toward base, cubitus much bent toward post-cubitus, no connecting veinlet from its upper branch to the radius or first sector, three sectors, the upper branch of third forked just before inner gradate series, the lower branch is simple, six gradate veinlets in both series, the last of the inner series slightly before the next to last; hind wings not marked, veins pale.

One specimen from Olympia, Wash. [T. Kincaid]. Close to the Eastern *H. stigmaterus*, but appears to be distinct.

Hemerobius venustus n. sp.—Alar expanse 22 mm. Head blackish, a pale spot on the labrum and above the antennæ, latter pale, thorax pale, a brown stripe each side, legs pale, the abdomen fuscous, wings with pale veins and brown dots, these dots often surrounded by little clouds, those on the veinlets connecting cubiti form a large and prominent spot, and on the gradate veinlets they form a continuous band, gradate veinlets brown, border of wing rather obscure, and with alternating dots, pterostigma hardly distinct. Wings not broad, tip scarcely pointed, costal area rather narrow toward base; cubitus distinctly bent toward the post-cubitus, but not as much as in many species, a connecting veinlet between cubitus and radius at the origin of the first sector; three sectors, upper branch of the third forked twice before the outer series of gradate veinlets, the lower branch is simple; six gradate veinlets of inner series, the last basad of the next to the last, six in outer series; hind wings not marked, the costal and some of the gradate veinlets brown.

One specimen, Mt. Washington, N. H. (Mrs. A. T. Slosson). A very handsome species.

Section B.—The cubitus straight, not bent toward the post-cubitus, the two connecting veinlets are thus of nearly equal length; a veinlet connecting cubitus and the first sector of the radius.

Hemerobius disjunctus n. sp.—Alar expanse 21 mm. Head black, with two pale spots above, antennæ pale, thorax pale, blackish on the sides, and some dark, almost connected, spots on the middle. Abdomen blackish. Legs

pale, darker toward the tips of the femora and the bases and tips of anterior tibiae. Wings with black veins interrupted with white, three dark spots on the posterior margin, all tending to form bands, the last one at about middle of wing and longer than the others, some clouding near the pterostigma, and on the outer series of gradate veinlets, the border marked with long black spots covering several veinlets, between the spots white, pterostigma obscure, cross-veins all black; wings rather slender, almost pointed at the tip, radius and subcosta rather close together, connected near base by a veinlet; cubitus straight, not curving toward post-cubitus, the connecting veinlets each way of nearly equal length, a veinlet connecting cubitus and first sector: three sectors, the third forked twice before the outer series of gradate veinlets; five gradate veinlets of the inner series, the last one coinciding with the next to last, seven in the outer series, second postcostal cell closed; hind wings not marked, veins black.

Two specimens, one from Mt. Washington, N. H. (Mrs. A. T. Slosson), the other from Sherbrooke, Canada (L'abbé P. A. Bégin), September.

Hemerobius coloradensis n. sp.—Alar expanse 18 mm. Head pale yellowish, a brown spot under each eye, and a larger one below the antennae with branches upward around the sockets; antennae pale yellowish, a brown stripe on the outer side of basal joint; thorax pale, in one specimen with a brown stripe each side; legs pale yellowish. Abdomen fuscous. Wings hyaline, veins white with brown dots, gradate veinlets brown, slightly clouded, more distinctly on the last two of the inner series, each brown dot gives off each side an oblique mark, which meeting, form small V marks, brown dots around border of wing, pterostigma indistinct; wings rather broad, tip rounded, costal area broad at base, subcosta and radius close together, connected near base; cubitus straight, not bending toward post-cubitus, the connecting veinlets each way nearly equal, a veinlet connecting cubitus and first sector: three sectors, upper branch of third forked again before the outer series of gradate veinlets, lower simple; six gradate veinlets of inner series, last one basad of the next to last, five or six in outer series; second post-costal cell closed; hind wings not marked, veins pale.

Two specimens, Ft. Collins, Col.; sent by Mr. C. F. Baker.

Hemerobius canadensis n. sp.—Alar expanse 12 mm. Head pale yellowish, black under the eyes, brown above each side, continued back upon the thorax; legs and abdomen pale yellowish; antennae similar, darker towards tips; wings hyaline, veins hyaline, dotted with uniform light brown, cross-veinlets not darker, margin with similar brown points; hind wings hyaline, with hyaline veins; pterostigma rather reddish in both pairs. Wings short, a little more than twice as broad, rounded at tips, cubitus not curving toward the post-cubitus, the connecting veinlets each way about equal, a connecting veinlet from cubitus to radius before the origin of the first sector; three sectors, upper branch of the third forked, lower simple, five or six gradate veins of inner series, last one basad of the next to last, four or five gradate veinlets in outer series; second post-costal closed.

One specimen, Sherbrooke, Canada, October [L'abbé P. A. Bégin].

Group III.—Four sectors.

Here belong two described species, *H. longifrons* Walk. and *H. alternatus* Fitch, and a new species below.

Hemerobius fidelis n. sp.—Alar expanse 14 mm. Head and thorax fuscous, antennæ and legs pale; wings broad, broadly rounded at tips, costal space very broad, radius and subcosta farther apart than usual, and connected toward the base by two veinlets: four sectors, the fourth arising beyond the middle of the wing, forked once before the outer series of gradate veinlets, other sectors simple, first connected near base to the radius, cubitus forked at usual place, the lower branch straight not bending toward the post-cubitus, upper branch connected to the first sector, the lower to post-cubitus and continued across to the post-cubital sector, each side of equal length; five gradate veinlets in inner series, last one basad of the next to last; seven or eight gradate veinlets in outer series; second post-costal cell closed. Wings hyaline, veins pale, scarcely dotted, gradate veinlets mostly fuscous, a fuscous band across wing from within pterostigma through gradate veinlets, and mostly fuscous beyond the second series of gradate veinlets; hind wings with an indistinct fuscous band across the middle, and another just beyond the outer gradate veinlets, leaving a narrow, pale, apical margin. Abdomen blackish.

One specimen, Gowanda, N. Y., June 25 [E. P. Van Duzee].

TRICHOPTERA.

Limnephilus ornatus n. sp.—Length 20 mm. Head yellowish, clothed with whitish hair, antennæ and palpi yellowish, with black hair on the former, thorax reddish, with whitish and some black hairs. Abdomen greenish, legs pale yellow, with black spines, black dot on trochanter. Wings hyaline, marked with silvery and fuscous, costal space without marks, a somewhat silvery stripe below the radius, behind this the disc is fuscous to the post-cubitus, a prominent silvery stripe in the thyridial area not reaching the anastomosis, another stripe in the base of the first subapical cell, a long one in fifth, and much shorter ones in bases of third and fourth apical cells, a long silvery stripe behind the post-cubitus, and the basal and anal region with some silvery hairs; basal joints of antennæ about once and a half longer than broad; about nine spines basad of the subapical spurs on the hind tibiæ, other tibiæ thickly spined to base; anastomosis somewhat oblique, first subapical on thyridial three times as far as the first apical on discal cell, veinlet at base of the subapicals oblique, in hind wings the fourth apical cell is plainly narrower at base than the second, in one specimen the third apical is divided.

Two females, one from Sherbrooke, Canada (L'abbé P. A. Bégin); the other from Franconia, N. H. (Mrs. A. T. Slosson). In one specimen there are a few pale spots in tips of the apical cells, and a fuscous dot in the base of the third one.

Anabolia unicolor n. sp.—Length 25 mm. Head and thorax ferruginous, clothed with yellowish hair; antennæ reddish yellow; legs yellowish, with black spines, black dot on the trochanter; wings are uniform luteo-hyaline, clothed with short yellow hair, veins yellow, a faint dark cloud beyond the anastomosis,

and a dark point in the base of the third apical cell; hind wings paler; palpi slender, basal joint of antennæ once and a half longer than broad; spurs 1, 3, 4, subapical pair on hind tibiæ about half the distance to apical pair; about seven spines basad of subapical spurs on the hind tibiæ, other tibiæ thickly spined to the base, a few at tips of femora. Wings moderately long, not very much rounded at tips, discal cell fully twice the length of its pedicel, third apical cell but slightly indents the anastomosis; first apical cell is longer on the discal than the fifth apical on the thyridial, veinlet at base of second subapical cell is very oblique; apical cells long, about of equal width at base; in the hind wings the fourth apical cell is as broad at base as the second apical cell.

One female, Skokomish River, Washington (Trevor Kincaid).

The species of this genus, four in number, can be separated by the following table:

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|--|--------------------|
| 1. Thorax blackish above..... | 2. |
| Thorax yellowish above..... | 3. |
| 2. Wings uniform fuscous..... | modesta. |
| Wings mottled..... | bimaculata. |
| 3. Wings uniform yellowish, no stripe on thorax..... | unicolor. |
| Wings faintly mottled, black stripe on thorax..... | consocia. |

Halesus minutus n. sp.—Length 9 mm. Head and palpi yellowish, with a few whitish hairs; antennæ fuscous, basal joints yellow; thorax honey-yellow, Abdomen dark above, except at base, pale beneath. Legs pale yellow, with black spines, black dot on trochanter. Wings hyaline, pale yellowish toward base, clouded with fuscous on the anastomosis, on veinlet at bases of subapical cells, and along the tips of some of the apical veinlets, a dot in base of third apical cell; veins yellow; basal joints of antennæ quite widely separated, nearly twice as long as broad; spurs 1-3-3 (but one of the apical pair to each hind tibia is wanting so apparently 1-3-2); two spines basad of the subapical spur on hind tibia, other tibiæ sparsely spined to base; wings moderately narrow, veined as in typical *Halesus*, save that the first subapical cell is barely twice so far on the thyridial as the first apical on the discal cell, and the veinlet at the bases of subapical cells is more oblique than usual, the apical cells are all of about equal width.

One specimen, Colorado, sent by Mr. C. F. Baker.

Enoicyla incerta n. sp.—Length 8 mm.; alar expanse 14 mm. Black, tips of the femora, the tibiæ, and bases of the hind tarsi yellowish; wings blackish, black veined, with black bristles on the veins, surface sparsely clothed with black hair, a faint hyaline spot at the areulus; hind wings are grayish with a blackish fringe. Legs with small black spines; spurs 1-2-2, discal cell nearly as long as the pedicel, closed obliquely beyond the anastomosis; first apical cell acute at base, fifth not reaching the anastomosis, the others nearly equal at base; radius curved at the pterostigma; subcoxa ends in a cross-vein in front of the pterostigma; in the hind wings the first apical is long pedicellate, and the fifth does not reach the anastomosis.

One from Sherbrooke, Canada, May (Bégin); one from Franconia, N. H. (Slosson), and several from Sea Cliff, N. Y., April.

Silo pallidus n. sp.—Length 8 mm. Yellowish, clothed with pale yellow hairs; head somewhat more reddish; veins of the wings pale; legs and spurs pale yellow; antennæ with basal joint much longer than the head, slender, not very densely clothed with hairs of moderate length, longer yellow hair above on head; wings long and slender, pointed at tip, posterior pair but little shorter than anterior pair; both branches of the radial sector forked, the upper branch of cubitus forked, all in the same region of wing; discoidal cell in fore wings several times longer than broad, closed; thyridial area closed; cubitus connected to post-cubitus before middle and toward tip, in both cases the veinlet continues across to the next vein; spurs 2-4-4.

Several specimens from Ithaca, N. Y.; plainly distinct from *S. griseus*, which has dark spurs and hind legs.

OLEMIRA n. gen.

A Sericostomatid; spurs 2-4-4; basal joint of antennæ much longer than head; discal cell in both wings closed; palpi of ♂ appressed to head; in ♀ the costal region of the fore wing is much broadened and reflexed upon the upper surface of the wing.

Olemira americana n. sp.—Length 9 mm. Black, legs yellowish, anterior pairs darker toward the tips; basal joint of antennæ blue-black, with black hair, beyond yellowish; palpi black, in ♂ forming a beak between the antennæ and clothed with blue-black hair; wings gray, anterior pair clothed with yellowish pile, veins dark, long black fringe on basal half of hind pair; fore wings little more than three times as long as broad, rounded at tip, hind pair not broader than fore ones, broadest beyond the middle, also rounded at tip; in ♀ the costal region of fore wings is reflexed on the upper surface of wing, reaching to near the middle, its under surface (which appears above) is naked; both branches of radial sector forked in the fore wings, only upper in hind wing; discal cell in fore wings many times longer than broad, narrowed at tip, shorter in hind wings; apex of ♀ abdomen with a short horn, and before it a bilobed median carina.

One male, several females, Sea Cliff, N. Y., July.

Mormonia vernalis n. sp.—Length 10 mm. Head pale below antennæ and clothed with black hair, above dark and with yellowish hair; palpi with black hair above, pale beneath, in ♂ more yellow hair on head and palpi; basal joints of antennæ pale, with white appressed hair and longer black, rest of antennæ fuscous, annulate with pale; thorax black, with yellow and some black hair. Legs pale, darker on outside of basal joints. Abdomen dark, in ♀ ventral segments margined with pale, in ♂ whole venter pale. Wings gray, clothed with yellow and longer black hair, a larger whitish spot near middle of posterior margin, variable in extent, basad of the spot the wing is often darker than elsewhere, fringe whitish at this point, beyond black; hind wings gray, long fringe at base gray, darker beyond; basal joint of antennæ scarcely longer than head, plainly shorter than in *M. togata*; spurs 2-4-4; wings rather slender, hind pair not broader than fore pair, discal cell closed in both, in fore wings it is about one half as long as the pedicel; the subcostal vein is very wavy; the last dorsal

segments of the ♂ abdomen bear a dense brush of hair, dark in middle, pale at ends.

Sea Cliff, N. Y.; common near streams, March, April and May.

Heteropteron (?) dissimilis n. sp.—Length 10.5 mm.; alar expanse 19 mm. Dull black, palpi paler, hairy, last joint slender, rather longer than the next to last; antennæ pale, basal joint fuscous, longer than diameter of eye, scarcely annulate beyond, longer than the wings; legs yellowish, spurs 2-4-4; abdomen black, segments margined with white, especially the last ventral. Wings blackish, sparsely clothed with black and yellow hairs, fringe black; venation much as in *H. borealis*, but the upper fork of the upper branch of radial sector is angulate and connected to radius, beyond the angle it is concave (in *H. borealis* it is straight), this makes the first apical cell wider in the middle; the lower branch of radial sector is forked, but much nearer to tip; at about region of anastomosis the veins are faint, and somewhat coalesce as in *H. borealis*; at this point there is a hyaline spot; behind there are two transverse veinlets as in that species; hind wings rather broad, blackish, with black fringe.

Several specimens, Sea Cliff, N. Y., June and July. This is hardly a true *Heteropteron*, yet congeneric with what I take to be Provancher's *H. borealis*. The general arrangement of the venation is like that of *Heteropteron*, but the anterior cross-veins are rather indistinct, besides the spurs are 2-4-4 in what seems to be a male, and there is no fringe on hind tibia.

Polycentropus signatus n. sp.—Length 8 mm.; alar expanse 15 mm. Head and thorax with long yellowish white hair, blackish behind the eyes; antennæ yellowish, annulate with fuscous; palpi pale, dark at tip; abdomen dark above, pale below; legs yellowish; wings with pale veins, mostly clothed with black hair, some pale hair on veins toward the base, a large yellowish white spot on the disc, connected behind to one at the arculus, a third over the region of anastomosis, black on costa; hind wings gray, also black on costa; both branches of the radial sector are forked, the lower at connecting veinlet, the upper rather to this veinlet than to margin; both branches of cubitus forked, the lower one much the nearer to the base; spurs 3-4-4; the inferior pieces of the ♂ genitalia are quite long, swollen above near the base, and then concave to the tip.

One male, Buffalo, N. Y., August (E. P. Van Duzee).

Polycentropus affinis n. sp.—Length 6 mm.; alar expanse 11 mm. Head and thorax with long yellowish hair, fuscous behind the eyes and on sides of thorax; antennæ luteous, barely annulate with fuscous; palpi pale; legs luteous, with whitish hair; wings grayish, with scattered yellow hair, a white spot at the forking of the cubitus, with a downward projection, another white spot on the veinlet connecting branches of cubitus and radial sector, upper branch of radial sector not forked.

Two specimens, one Ontario, Canada; the other Buffalo, N. Y. (E. P. Van Duzee). Very close to *P. lucidus*, but latter has upper branch of radial sector forked, and hyaline spots differently arranged.

Polycentropus canadensis n. sp.—Length 6 mm.; alar expanse 11 mm. Head and thorax with long white hair, patches of black above eyes and just before bases of wings; antennæ pale, annulate with brown. Legs yellowish, faintly marked on the tarsi. Wings blackish, thickly spotted with white, rather larger at posterior base and at cubitus; hind wings uniform gray, with a white fringe behind; both branches of radial sector forked, the upper one much beyond, and the lower just before the cross-vein; both branches of cubitus forked, the lower nearer the base; spurs 3-4-4.

Two specimens, Sherbrooke, Canada, July (L'abbé P. A. Bégin). Recognized by its small size and mottled wings.

Beræa nigritta n. sp.—Length 4 mm. Head black, shining, broad, with a rather rounded ridge from eye to eye, a small pitted tubercle each side above, and two pale tubercles below the ridge near the middle; basal joint of antennæ black, rest pale; palpi pale, with black hair; legs pale, mostly with white hair, but some black, a few black spines on tarsi, hind tibia very much longer than femur, spurs 2-2-4; thorax and abdomen black. Wings blackish, with pale veins and black hairs, veins indistinct, no cross-veins seen, lower branch of radial sector and lower branch of cubitus forked. Abdomen with a sharp slender spur below before tip.

Two specimens, Sea Cliff, N. Y., June.

Glossosoma americana n. sp.—Length 9 mm.; alar expanse 16 mm. Pale, head yellowish, darker above, with luteous hair; antennæ yellow, apical half fuscous; palpi pale brownish; thorax pale, with luteous hair; legs pale yellowish, spurs blackish, coxæ fuscous. Abdomen light brown. Wings hyaline, sparsely clothed with luteous and gray hair, some near tips of fore wings and the fringe darker gray, veins luteous, a white mark at end of thyridial area, a spot on forking of cubitus, and another at arculus; antennæ shorter than the body, slender; basal joint a little enlarged; third and fifth joints of palpi subequal, fourth a trifle shorter. Legs moderate, hind tibiæ quite slender and curved, tibia and first tarsal joint enlarged in second legs of ♀; spurs 2-4-4, the upper pair on hind legs about their length before the apical pair, above them are three small yellow spines; wings moderately broad, rounded at tip, discal cell in both pairs closed, radius above the middle of discal cell in fore wings suddenly, but slightly bent, an oblique cross-vein connecting the cell and the radius, fifth apical cell almost reaching the anastomosis; near the tip of the ante-penultimate ventral segment of the ♀ is a distinct conical tooth.

One female, Franconia, N. H. (Mrs. A. T. Slosson).